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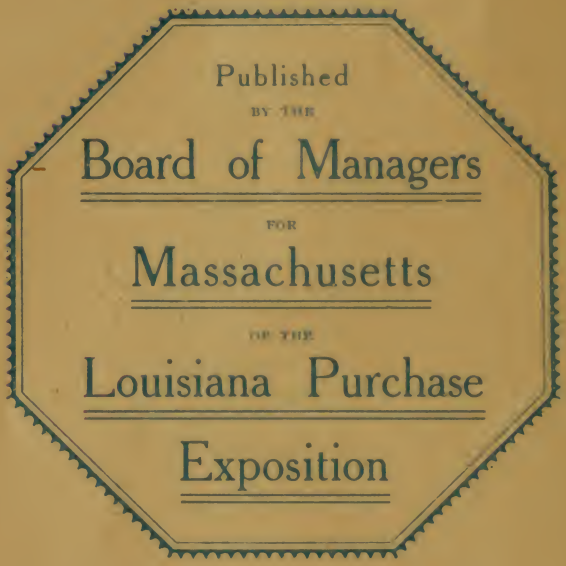
MASSACHUSETTS
* BUREAU *
OF STATISTICS OF
* LABOR *

Prepared by the
Massachusetts Bureau of Statistics of Labor
Rooms 250 - 258, State House, Boston

CHAS. F. PIDGIN, Chief
Frank H. Drown, First Clerk Wm. G. Grundy, Second Clerk

With the Compliments of the Chief



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Massachusetts Bureau of Statistics of Labor

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Massachusetts Bureau of Statistics of Labor.

Officers: 1869-1903.

CHIEFS.

HENRY KEMBLE OLIVER,	1869-1873
CARROLL DAVIDSON WRIGHT,	1873-1888
HORACE GREELEY WADLIN,	1888-1903
CHARLES FELTON PIDGIN,	1903-

DEPUTIES AND FIRST CLERKS.

George Edwin McNeill (Deputy),	1869-1873
George Howard Long (Deputy),	1873-1876
Charles Felton Pidgin (Secretary, 1873-1876),	1876-1903
Frank Henry Drown,	1903-

SECOND CLERKS.

William Chamberlain Hunt,	1884-1888
Frank Henry Drown,	1888-1903
William George Grundy,	1903-

LOCATION OF OFFICES IN BOSTON.

State House,	1869 1873
33 Pemberton Square,	1873-1883
Commonwealth Building (near State House),	1883-1885
20 Beacon Street,	1885-1898
Rooms 250-258, State House,	1898-

CHRONOLOGICAL HISTORY

OF THE

BUREAU OF STATISTICS OF LABOR AND OF LABOR LEGISLATION IN MASSACHUSETTS FROM 1831 TO 1903.

1831. Gov. Lincoln presented report to legislature June 1, providing for equal distribution of assets among creditors, and abolishing imprisonment for any debt less than fifty dollars.

1832. September. — Convention of delegates from the farmers, mechanics, and workingmen of New England adopt resolutions setting forth burdens suffered by laboring classes from excessive hours, imprisonment for debt, the lack of a lien law, onerous militia service, and various other causes.

1833. March 12. — South Reading Mechanic and Agricultural Institution incorporated.

1834. January 21. — Meeting to form a general trades' union.

March. — Constitution for general trades' union submitted and ratified by the trades.

February 28. — Worcester County Manual Labor High School incorporated.

March 6. — Berkshire County Manual Labor High School incorporated.

March 31. — Act abolishing imprisonment for debt.

September. — Meeting of workingmen in Boston chose ten delegates to a convention of farmers, mechanics, and others, to be holden at Northampton.

1835. Authorities of the city of Boston refused the use of a hall for an evening meeting to discuss the ten-hour movement.

1836. Chap. 245, vol. 13, Laws of Massachusetts, 1834-1836. — Requires three months' schooling each year for youths employed in manufacturing establishments.

1837. The State instituted inquiries concerning the products of industry of the population, but the results were exceedingly erroneous.

1839. Chap. 58, Laws. — Charlestown Mechanics' Union Charitable Association incorporated.

1840. April 10. — President Van Buren issued the order directing "that all public establishments will hereafter be regulated, as to working hours, by the ten-hour system."

1841. Chap. 54, Laws. — Danvers Mechanic Institute incorporated.

1842. The hours of labor of children under twelve were limited to ten per day.

1843. Chap. 49, Laws. — Boston Society for the Diffusion of Information among Emigrants incorporated.

1844. The ten-hour plan was established in most of the shipbuilding trades in the State.

1845. Chap. 99, Acts. — Act granting one-half of a township in Maine, six miles square, to the Worcester County Manual Labor High School.

Chap. 169, Acts. — Brook Farm Phalanx incorporated for promoting education, agricultural knowledge, and habits of manual and mechanical industry.

Chap. 171, Acts. — An Act to obtain statistical information in relation to certain branches of industry.

House Document, No. 50. — Petitions to the legislature for the regulation of the hours of labor in corporations, eleven hours being the fixed time desired. Committee reported against any legislation.

1849. Chap. 220, Acts. — An Act defining and repealing sections of previous acts concerning the employment of children.

1850. Chap. 66, Acts. — An Act incorporating the Worcester County Mechanics' Association; "purpose to promote moral and intellectual improvement, perfect the mechanic arts, and for charitable purposes."

House Document, No. 153. — Committee majority report considered legislation inexpedient; but minority reported a bill establishing *eleven* hours as the legal day on and after September 1, 1850, and ten hours on and after July 1, 1851. Again was legislation postponed.

1851. Chap. 343, Acts. — An Act to secure to mechanics and laborers their payment for labor by a lien on real estate.

1852. Chap. 240, Acts. — "Requires all persons having children under their control to send them to school three months each year."

Chap. 307, Acts. — An Act to incorporate the Suffolk Mutual Loan and Accumulating Fund Association; "object to loan funds to those contributors who wish to purchase homesteads."

House Document, No. 185. — Attempt made to have ten hours made the legal day, in the absence of a special contract, and that children under fifteen should not work more than ten hours; the bill failed.

1854. Chap. 392, Acts. — Model Lodging House Association incorporated.

1855. Chap. 18, Acts. — Act incorporating an industrial school for girls.

Chap. 231, Acts. — Extension of the lien law to ships and vessels.

Chap. 309, Acts. — Requires school committees to report violations of the law of May, 1852, to the treasurer of their towns and cities.

Chap. 379, Acts. — Amends Chap. 220, Acts of 1849, concerning children.

Chap. 431, Acts. — Amendment to lien law.

Chap. 444, Acts. — Imprisonment for debt, except in cases of fraud, abolished.

1857. Chap. 141, Acts. — Consolidates the Acts concerning imprisonment for debt and the punishment of fraudulent debtors.

Chap. 50, Acts. — Requires the insurance commissioners to report annually the conduct and condition of the loan fund associations.

1858. Chap. 83, Acts. — Requires eighteen weeks' schooling.

Chap. 55, Acts. — Amendment to lien law.

1859. Chap. 188, Acts. — School committees required to give notice to treasurers of violations of the Act of 1852; treasurer fined if he fails to comply.

1863. Chap. 166, Acts. — An Act to provide for the reception of a grant of Congress, and to create a fund for the promotion of education in agriculture and the mechanic arts.

1865. Chap. 62, Acts. — Appoints an unpaid commission of five to collect information and statistics in regard to the hours of labor and the condition and prospects of the industrial class.

Chap. 116, Acts. — Act to incorporate the Boston Labor Reform Association, for the purpose of improving the condition of the mechanic and laboring classes in their various occupations, etc.

Chap. 206, Acts. — Exempts from attachment the tools of a mechanic to the amount of not more than three hundred dollars.

Chap. 249, Acts. — An Act to establish a state police.

Chap. 270, Acts. — Amends the apprenticeship law, by repealing imprisonment, and substituting a bond.

March 8. — Order offered in House that the Judiciary Committee consider the expediency of regulating and limiting the number of hours constituting a day's labor, and to provide penalties for violation. Also a clause against combinations by dealers to advance the price of the necessaries of life. Resulted in appointment of the unpaid commission before mentioned.

1866. Governor Bullock's Inaugural. — Emphasizes the importance of the question of hours of labor among industrial classes, etc.

Chap. 67, Acts. — The business hours of the departments of the State government to be determined by the governor and council.

Chap. 261, Acts. — An Act in addition to an Act to establish a State police.

Chief's Private Office—Western End.

Chap. 273, Acts. — Act prohibits: — (1) Employment of children under ten years of age in any manufacturing establishment; (2) employment of children between ten and fourteen unless they attend school six months every year; (3) employment of children under fourteen more than eight hours per day. Penalties provided for violation.

Chap. 290, Acts. — Authorizes the formation of co-operative associations.

Report of the Commission of 1865. — Frequent and gross violation of the school law found. Recommended: — (1) To give children in manufacturing districts twice the amount of schooling now required, or adopt the "half-time system"; (2) that an inspector be appointed to enforce these laws, and to look after the children put to apprenticeship; (3) that provision be made for the annual collection of reliable statistics in regard to the condition, prospects, and wants of the industrial classes.

Chap. 85, Resolves. — Resolve appropriates ten thousand dollars for representation of industries of the State at the Universal Exposition in 1867 at Paris.

Chap. 92, Resolves. — Resolve authorizing the appointment by the governor of a commission to investigate the subject of the hours of labor in its relation to the social, educational, and sanitary condition of the working classes.

1867. Chap. 174, Acts. — The Co-operative Mills incorporated.

Chap. 177, Acts. — An Act to increase the number of the State police.

Chap. 264, Acts. — Shares in co-operative associations to the value of twenty dollars exempted from attachment and execution.

Chap. 285, Acts. — Act in relation to schooling and hours of labor of children employed in manufacturing and mechanical establishments.

Report of Commission of 1866. — Recommend that: — (1) Execution of provisions of Chap. 273, Acts of 1866, which forbid employment of children between the ages of ten and fourteen, and provides for their attendance at school, be insured; (2) employment of persons under eighteen, in factories for more than ten hours per day, or sixty hours per week, be prohibited; that one hour each day be allowed for dinner; (3) an *Inspector of Labor* be appointed to see that all laws relating to the interests of laboring classes are faithfully executed; (4) a Bureau of Statistics be established to collect and make available all facts relating to the industrial and social interests of the Commonwealth. Could not recommend enactment of any law restricting hours of labor for the *adult* population.

1868. Chap. 95, Acts. — Wages of wife and minor children of debtor exempted from attachment.

Chap. 279, Acts. — Overseers of poor prohibited from removing minors from the State.

1869. Chap. 302, Acts. — Provides for cancelling the indentures of wards of the State in certain cases.

Chap. 305, Acts — Provides that towns and cities may maintain evening schools for those over twelve years of age.

Chaps. 57 and 72, Resolves. — Appropriate fifty thousand dollars to the Worcester Country Free Institute of Industrial Science, with a proviso for gratuitous instruction.

Chap. 102, Resolves. — Provides for the establishment of a Bureau of Statistics of Labor.

Resolve providing for the establishment of a Bureau of Statistics on the subject of Labor.

Resolved, That the governor, with the advice and consent of the council, is hereby authorized to appoint, as soon after the passage of this resolve as may be, and thereafter biennially in the month of May, some suitable person to act as chief, who shall have power to appoint a deputy, and said chief with his deputy shall constitute a bureau of statistics, with headquarters in the State House.

The duties of such bureau shall be to collect, assort, systematize, and present in annual reports to the legislature, on or before the first day of March in each year, statistical details relating to all departments of labor in the Commonwealth, especially in its relations to the commercial, industrial, social, educational, and sanitary condition of the laboring classes, and to the permanent prosperity of the productive industry of the Commonwealth.

That said bureau shall have the power to send for persons and papers, to examine witnesses under oath, and such witnesses shall be summoned in the same manner, and paid the same fees as

witnesses before the superior courts of the Commonwealth. The compensation of said bureau shall be twenty-five hundred dollars annual salary for the chief, and two thousand dollars annual salary for the deputy. And the governor is hereby authorized to draw his warrant for the payment of said sums, together with such office and travelling expenses of said bureau as he with the council shall approve.

Gov. Claflin appointed Hon. Henry K. Oliver as chief, who appointed George E. McNeill as his deputy.

1870. Gov. Claflin's Inaugural.— "The condition of labor demands our earnest attention. . . . Public policy, then, would justify special care of all their interests on the part of the legislature."

Chap. 281, Acts.— Grand Lodge of the Knights of St. Crispin incorporated.

Chap. 48, Resolves.— State Board of Health directed to ascertain rate of mortality among minors employed in the textile industries.

Chap. 74, Resolves.— Pay of assistants in Bureau of Statistics of Labor defined.

Chief of Bureau authorized to employ assistants and incur expense, not exceeding five thousand dollars; no assistant to be paid more than four dollars per day in addition to his necessary travelling expenses.

Bills introduced for:— (1) A ten-hour law for women and children; (2) an eight-hour law for employees of the State, cities, and towns; failed to pass.

1871. Gov. Claflin's Inaugural.— "The time has now come to inquire whether the hours of labor in manufactories, established by law, may not be limited with great advantage to both employers and the employed."

Chap. 280, Acts.— Tenement or lodging house Act provides for ventilation, fire escapes, sewerage, etc., therein.

Chap. 323, Acts.— Women's Economical Garden Homestead League incorporated.

Chap. 324, Acts.— Boston Co-operative Building Company incorporated.

Chap. 394, Acts.— An Act to establish a better system of police.

Chap. 82, Resolves.— Bureau of Statistics of Labor directed to prepare a plan for a system of half-time schools.

Officers of the bureau recommend a thorough and exhaustive system of statistics to be gathered during the next State census, covering subjects of wages, earnings, and savings, time employed and lost, of all classes of working people, the number of persons employed in the several industrial occupations, and other matters connected with the subject of labor in the State.

1872. Gov. Washburn's Inaugural.— "The great desideratum is to determine what would be a fair division of profits between the employer and employee. Settle the question as to compensation per hour, and there will be no serious difficulty about the number of hours."

Chap. 86, Acts.— Authorizes cities and towns to establish industrial schools.

Chap. 281, Acts.— Amends the statutes in relation to imprisonment of poor debtors.

Chap. 318, Acts.— Extends provisions of the lien law.

Chap. 348, Acts.— Secures cheap morning and evening trains on railways for use of workingmen.

The bureau report in relation to depositors in savings banks provoked much discussion. Resolve to abolish the bureau defeated.

1873. Gov. Washburn in his address speaks of the dissatisfaction with methods and results of the bureau, and suggests plans for solving difficulty.

Chaps. 262 and 279, Acts.— Acts to secure attendance of children at school. (Twenty weeks for children between eight and twelve).

Chap. 306, Acts.— Authorizes towns to pay such sums as they see fit for public libraries.

Chap. 377, Acts.— Salary of chief of bureau fixed at three thousand dollars per annum.

Chap. 6, Resolves.— Appropriates fifteen thousand dollars to represent the industries and educational system of the State at the Vienna Exposition.

Chap. 63, Resolves.— Repeals resolve requiring the headquarters of the Bureau of Statistics of Labor to be in the State House.

Chap. 66, Resolves.— Appropriates an additional twenty-five hundred dollars for expenses and clerical services of Bureau of Statistics of Labor.

Chief's Private Office—Eastern End.

Change in the officers of the bureau, and question as to its abolishment dropped.

Gov. Washburn commissioned Hon. Carroll D. Wright as chief, who selected Major George H. Long as his deputy.

Officers of the bureau recommend means for collecting statistics.

The office of the bureau removed from the State House to No. 33 Pemberton Square.

1874. Gov. Washburn in his address says, "the object of the bureau should be to deal with statistics, to keep back nothing, but as far as possible to collect all the facts, and leave them to speak for themselves." Recommends adoption of English half-time system for children under fifteen, and enactment of a ten-hour law.

Chap. 221, Acts. — Establishes hours of labor at sixty per week for women and children under eighteen years of age.

Chap. 279, Acts. — Prevents appearance of children under fifteen as acrobats, contortionists, etc.

Chap. 386, Acts. — Provides for taking the industrial statistics and decennial census of the Commonwealth.

Chap. 393, Acts. — Regulates deposits in savings banks.

Chap. 405, Acts. — Police commission abolished.

Chap. 62, Resolves. — Directs Bureau of Statistics of Labor to prepare plan for education of children employed in manufacturing establishments.

1875. Gov. Gaston in his address recommends the adoption of the English half-time system and the establishment of instruction in practical pursuits.

Chap. 15, Acts. — State detective force established; Chap. 394, Acts of 1871, and Chap. 405, Acts of 1874 repealed.

Chap. 93, Acts. — An Act respecting the taking of the decennial census in Boston and other cities.

Chap. 211, Acts. — Regulates special contracts for labor.

Chap. 37, Resolves. — Resolve providing compensation for taking the census and industrial statistics.

Chap. 71, Resolves. — Appropriates fifty thousand dollars to represent the arts, institutions, and industries of the Commonwealth at the Centennial Exhibition at Philadelphia.

An attempt was again made to abolish the Bureau of Statistics of Labor, but was not successful.

The Bureau in its report took strong ground against the establishment of half-time schools in this State, contending that children should have no legal status as workers, but only as pupils. Also recommended that laws be revised so as to provide compulsorily for the attendance of all children between five and fifteen during the entire *school* year; also outline of a bill for accomplishing this result was presented.

The bureau took ground, also, against the introduction of the English factory system into Massachusetts, and suggested an outline for a factory act.

1876. Gov. Rice in his inaugural suggested the broadening of the law under which the bureau worked.

Chap. 3, Acts. — Authorizes the teaching of sewing in the public schools.

Chap. 52, Acts. — Relates to the employment of children and regulations respecting them.

Chap. 142, Acts. — Massachusetts Family Bank incorporated.

Chap. 176, Acts. — Relates to the regulation and inspection of buildings in Boston.

Chap. 216, Acts. — Relates to the inspection of factories and public buildings.

Mr. Charles F. Pidgin appointed chief clerk, which office was established in place of deputy.

Salary of chief reduced to $2,500, in accordance with general system of reduction of salaries of state officials.

1877. Chap. 84, Acts. — Provides for the more effectual prevention of fire, and better preservation of life and property in Boston.

Chap. 97, Acts. — Relates to the dissolution of certain attachments by trustee process.

Chap. 101, Acts. — Relates to special contracts between persons and corporations and their servants, employees, and workmen.

Chap. 172, Acts. — An Act for the better protection of children.

Chap. 214, Acts. — Relates to the inspection of factories and public buildings; that State detectives be detailed to act as the inspectors.

Chap. 224, Acts. — An Act concerning co-operative saving fund and loan associations.

Chap. 38, Resolves. — Provides for the printing, binding, and distribution of additional copies of the decennial census and statistics of industry.

Chap. 39, Resolves. — Relates to the fencing of railroads.

Chap. 60, Resolves. — Provides for the supervision of statistics.

Chief of bureau again recommends the bringing under one organization the gathering and preparation of all statistics relating in any way to the condition of the people.

1878. Chap. 52, Acts. — Relates to the supervision of co-operative saving fund and loan associations.

Chap. 209, Acts. — Insures payment of wages earned and for materials used in constructing public buildings and public works.

Chap. 250, Acts. — Relates to the taxation of co-operative saving fund and loan associations.

Chap. 257, Acts. — Relates to the employment of children and regulations respecting them.

1879. Gov. Talbot in his inaugural suggests that all wages due for labor be exempt from attachment.

Chap. 59, Acts. — Provides for licensing conductors, drivers, and despatchers of street railway cars in the city of Boston.

Chap. 97, Acts. — An Act relative to pensions to disabled police officers of the city of Boston.

Chap. 128, Acts. — Concerns the payment of laborers' wages by cities.

Chap. 129, Acts. — Relates to co-operative saving fund and loan associations.

Chap. 205, Acts. — Concerns the fencing of railroads.

Chap. 207, Acts. — Regulates the hours of labor in manufacturing establishments.

Chap. 305, Acts. — District police established; State detective force abolished.

Chap. 37, Resolves. — Relates to a uniform system of laws in certain states regulating hours of labor.

Chief of the bureau suggests the proper committee may find some cheap and expeditious method of enabling workingmen to avail themselves of provisions of the insolvent laws.

1880. Gov. Long in his inaugural recommends that the inspectors of factories, etc., be made a separate department, charged solely with the duties of inspection and the enforcement of the laws connected therewith.

Chap. 88, Acts. — Relates to licensing public exhibitions in which children are employed.

Chap. 107, Acts. — Relates to pensioning disabled members of the fire department of the city of Boston and for other purposes.

Chap. 137, Acts. — Relates to the employment of children and regulations respecting them.

Chap. 178, Acts. — An Act to amend Chap. 305, Acts of 1879, establishing a district police force.

Chap. 181, Acts. — Relates to the inspection of factories and buildings.

Chap. 194, Acts. — Regulates the hours of labor in manufacturing establishments.

Chap. 195, Acts. — Lynn Workingmen's Aid Association incorporated.

Chap. 196, Acts. — An Act concerning charitable and other beneficiary associations.

Chap. 197, Acts. — An Act relative to better means of egress from manufacturing establishments.

Chap. 12, Resolves. — Authorizes chief of Bureau of Statistics of Labor to accept appointment as supervisor of United States Census.

Chap. 23, Resolves. — Provides for the collection by the Bureau of Statistics of Labor of certain statistics in regard to drunkenness and liquor selling.

Chap. 29, Resolves. — Resolve relative to a uniform system of laws in certain States regulating the hours of labor.

Chap. 48, Resolves. — Resolve relative to industrial conciliation and arbitration.

Chief of bureau suggests repeal of provisions of trustee laws relating to wages.

1881. Chap. 117, Acts. — An Act for the regulation and inspection of buildings in the city of Boston.

General Office of the Bureau: Chief Clerk and Second Clerk.

Chap. 137, Acts. — Regulates the use of explosive, combustible, and inflammable compounds in manufacturing establishments; inspectors of factories and public buildings to enforce same.

Chap. 195, Acts. — Relates to the inspection of factories and public buildings.

Chap. 235, Acts. — An Act concerning the examination of debtors and witnesses in proceedings in insolvency, and the discharge of insolvent debtors.

Chap. 257, Acts. — Relates to the discharge of insolvent debtors.

Chap. 43, Resolves. — Resolve relative to industrial conciliation and arbitration.

1882. Chap. 150, Acts. — Act for the preservation of the health of females employed in manufacturing, mechanical, or mercantile establishments.

Chap. 208, Acts. — Relates to the inspection of buildings.

Chap. 244, Acts. — Authorizes the formation of relief societies by the employees of railroad and steamboat corporations.

1883. Chap. 84, Acts. — Permits municipal officers to authorize manufacturers to ring bells and use whistles and gongs for the benefit of their workmen.

Chap. 157, Acts. — Relates to the employment of minors and women.

Chap. 173, Acts. — Provides against the use of unsafe elevators.

Chap. 174, Acts. — An Act for the establishment and maintenance of evening schools.

Chap. 217, Acts. — Relates to the employment of prisoners.

Chap. 224, Acts. — Relates to the employment of children in manufacturing and other establishments.

Chap. 243, Acts. — Fixes responsibility of railroad corporations for negligently causing death of employees.

1884. Chap. 52, Acts. — Prohibits the locking of the doors of buildings wherein operatives are employed during the hours of labor.

Chap. 69, Acts. — Relates to instruction in the elementary use of hand-tools in public schools.

Chap. 103, Acts. — Provides for the furnishing of free text books and school supplies to the pupils of the public schools.

Chap. 181, Acts. — Act providing for taking the State Census by the Bureau of Statistics of Labor.

Chap. 222, Acts. — Requires railroad companies to use safety couplers on freight cars.

Chap. 275, Acts. — Relates to the employment of minors in mercantile establishments.

In accordance with provisions of Chap. 4, Acts of 1884, Mr. William C. Hunt appointed second clerk of the bureau.

1885. Chap. 128, Acts. — Improved Dwellings Association incorporated.

Chap. 222, Acts. — Relates to the employment of children in manufacturing and other establishments.

1886. Chap. 87, Acts. — Provides for the weekly payment of wages by corporations.

Chap. 90, Acts. — Relative to the printed notice required in manufacturing establishments.

Chap. 120, Acts. — Provides for the protection of railroad employees.

Chap. 125, Acts. — Authorizes railroad corporations to join certain relief societies.

Chap. 173, Acts. — Relates to providing means of communication between rooms in manufacturing establishments where machinery is propelled by steam and the room where the engineer is stationed.

Chap. 194, Acts. — Exempts the wages and lay of seamen from attachment by the trustee process.

Chap. 209, Acts. — Authorizes corporations to issue special stock to be held by their employees only.

Chap. 236, Acts. — Authorizes the establishment and maintenance of evening high schools in certain cities.

Chap. 260, Acts. — An Act relative to reports of accidents in factories and manufacturing establishments.

Chap. 263, Acts. — Provides for a State board of arbitration for the settlement of differences between employers and their employees.

1887. Chap. 103, Acts. — Secures proper sanitary provisions in factories and workshops.

Chap. 121, Acts. — Prohibits the employment of children in cleaning dangerous machinery.

Chap. 173, Acts. — Secures the proper ventilation of factories and workshops.

Chap. 215, Acts. — An Act to secure uniform and proper meal times for children, young persons, and women employed in factories and workshops.

Chap. 263, Acts. — Makes the first Monday of September, known as Labor's Holiday, a legal holiday.

Chap. 269, Acts. — Amends an act providing for a State board of arbitration for the settlement of differences between employers and employees.

Chap. 270, Acts. — Extends and regulates the liability of employers to make compensation for personal injuries suffered by employees in their service.

Chap. 272, Acts. — Facilitates voting by employees.

Chap. 280, Acts. — Relates to the employment of minors and women in manufacturing and mechanical establishments.

Chap. 361, Acts. — Regulates fines for imperfect weaving.

Chap. 422, Acts. — Prevents illegal peddling and begging by certain minors.

Chap. 433, Acts. — Relates to the employment of minors who cannot read and write in the English language.

Chap. 447, Acts. — Relates to the labor of the prisoners in the State prison, reformatories, and houses of correction.

1888. Chap. 22, Acts. — Defines the meaning of the words "contract for the labor of prisoners" as used in chap. 447, Acts of 1887.

Chap. 92, Acts. — Workingmen's Building Association incorporated.

Chap. 108, Acts. — Workingmen's Loan Association incorporated.

Chap. 113, Acts. — Divides the district police force into two departments.

Chap. 134, Acts. — Authorizes the incorporation of labor or trade organizations.

Chap. 149, Acts. — An Act to cause proper sanitary provisions and proper ventilation in public buildings and schoolhouses.

Chap. 155, Acts. — Extends and regulates the liability of employers to make compensation for personal injuries suffered by employees in their service.

Chap. 261, Acts. — Relates to the State board of arbitration and conciliation.

Chap. 305, Acts. — Relates to proper sanitary provisions in factories and workshops.

Chap. 316, Acts. — Regulates the erection and construction of certain buildings.

Chap. 348, Acts. — Relates to the employment of children.

Chap. 403, Acts. — Relates to the labor of prisoners.

Chap. 426, Acts. — Relates to ways of egress and means of escape from fire in certain buildings.

Hon. Carroll D. Wright closed his connection with the bureau; appointed Commissioner of Labor of the United States. Horace G. Wadlin appointed chief.

1889. Chap. 135, Acts. — Relates to the employment of minors who cannot read and write the English language.

Chap. 181, Acts. — National Home Building Company incorporated.

Frank H. Drown appointed second clerk vice William C. Hunt resigned.

1890. Chap. 37, Acts. — Relates to the State directors in the Collateral Loan Company and the Workingmen's Loan Association.

Chap. 63, Acts. — Relates to the taxation of co-operative banks.

Chap. 83, Acts. — Relative to reports of accidents in factories and in manufacturing and mercantile establishments.

Chap. 90, Acts. — Relates to employment of minors on elevators.

Chap. 97, Acts. — Authorizes the publication of parts of reports of the Bureau of Statistics of Labor, when complete, before presentation of entire reports.

Chap. 179, Acts. — Relates to providing means of communication between certain rooms in manufacturing establishments.

Chap. 183, Acts. — Prohibits the employment of women and minors in manufacturing establishments, between the hours of ten o'clock at night and six o'clock in the morning.

Bureau and Census Divisions.

Chap. 299, Acts.— Relates to the age and schooling certificates of children employed in factories, workshops, and mercantile establishments.

Chap. 310, Acts. — Relates to the business of co-operative banking.

Chap. 375, Acts. — Constitutes nine hours a day's work for all laborers, workmen, and mechanics employed by or on behalf of the Commonwealth or any city or town therein.

Chap. 384, Acts.— Provides that persons having children between eight and fourteen cause such children to attend school at least thirty weeks of the school year.

Chap. 385, Acts. — Relates to the State board of arbitration for the settlement of differences between employers and their employees.

1891. Chap. 125, Acts. — Prohibits the imposition of fines or deductions of wages of employees engaged at weaving.

Chap. 209, Acts. — Prohibits the employment of prisoners outside their places of confinement.

Chap. 239, Acts. — Relates to the weekly payment of wages by corporations.

Chap. 244, Acts. — Relates to the discharge of mechanics' liens.

Chap. 302, Acts. — Relates to the district police force.

Chap. 317, Acts. — Relates to the employment of minors who cannot read and write in the English language.

Chap. 350, Acts. — Constitutes nine hours a day's work for county employees.

Chap. 357, Acts. — Prevents the manufacture and sale of clothing made in unhealthy places.

Chap. 361, Acts. — Raises the compulsory school age to fifteen years in cities and towns where opportunity is given for industrial education.

Chap. 371, Acts. — Relates to the employment of prisoners.

Chap. 106, Resolves. — Provides for a commission to investigate the subject of manual training and industrial education.

1892. Chap. 83, Acts. — Relates to the employment of women and minors for the purpose of manufacturing.

Chap. 210, Acts. — Provides a form of complaint for violation of the laws regulating the employment of women and minors in manufacturing establishments.

Chap. 270, Acts. — Relates to the payment for labor performed on buildings or public works owned by cities or towns.

Chap. 330, Acts. — Provides a penalty for intimidating laborers.

Chap. 352, Acts. — Relates to the employment of children.

Chap. 357, Acts. — Relates to the hours of labor of minors and women employed in manufacturing and mechanical establishments.

Chap. 382, Acts. — Relates to the duties and compensation of expert assistants appointed by the State Board of Arbitration and Conciliation.

Chap. 410, Acts. — Prohibits the deduction of wages of employees engaged at weaving.

Chap. 73, Resolves. — Provides for continuation of investigation into the subject of manual training and industrial education.

1893. Chap. 47, Acts. — An Act to amend the law relative to fraternal beneficiary corporations so as to further the formation of such organizations among permanent employees of towns and cities.

Chap. 106, Acts. — Relates to the granting of licenses for carrying on offensive trades.

Chap. 108, Resolves. — Provides for the codification of certain statutes which the inspection department of the district police is required to enforce.

Chap. 111, Acts. — Requires the chief of the district police to receipt for reports of accidents.

Chap. 173, Acts. — Relative to notice in proceedings to enforce liens upon personal property.

Chap. 199, Acts. — Relates to the erection and construction of certain buildings.

Chap. 208, Acts. — Authorizes cities and towns to provide free evening lectures.

Chap. 225, Acts. — Authorizes cities and towns to establish and maintain public playgrounds.

Chap. 230, Acts. — Relative to the business of savings banks, institutions for savings, and trust companies.

Chap. 246, Acts. — Relates to the manufacture and sale of clothing made in unhealthy places.

Chap. 285, Acts. — Relates to actions commenced by trustee process.

Chap. 293, Acts. — Relates to the construction, maintenance, and inspection of buildings in the city of Boston.

Chap. 299, Acts. — People's Building Association incorporated.

Chap. 321, Acts. — Relates to the admission of fraternal beneficiary organizations of other States.

Chap. 359, Acts. — Relates to the liability of employers to make compensation for personal injuries suffered by employees in their service.

Chap. 386, Acts. — Constitutes ten hours in twelve consecutive hours a day's work for certain employees of street railway companies.

Chap. 387, Acts. — Provides for the appointment of an additional district police officer for temporary service in the inspection of uninsured boilers.

Chap. 401, Acts. — Provides for the payment of an allowance to families of firemen killed or fatally injured in the discharge of their duties.

Chap. 406, Acts. — Relates to contracts requiring the employment of manual labor made by or on behalf of the Commonwealth.

Chap. 417, Acts. — An Act to codify and consolidate the laws relating to elections.

Chap. 418, Acts. — Terminates the endowment business of fraternal beneficiary corporations.

Chap. 443, Acts. — Protects persons in their labels, trade marks, and forms of advertising.

Chap. 477, Acts. — Relates to the licensing of plumbers and the supervision of the business of plumbing.

Resolutions relative to national legislation regulating the hours of labor of women and minors in textile manufacturing establishments.

Resolutions relative to the Chinese Exclusion Act.

Resolution relative to the establishment of a government telegraph and telephone service.

1894. Chap. 60, Acts. — An Act relative to the powers of fraternal beneficiary corporations which limit their membership to the permanent employees of the Commonwealth and of towns and cities.

Chap. 81, Resolves. — Provides rooms for the Bureau of Statistics of Labor for the purpose of taking the decennial census.

Chap. 119, Acts. — For the protection of the public health in the city of Boston.

Chap. 180, Acts. — Relates to intelligence offices.

Chap. 224, Acts. — Provides for taking the decennial census of the Commonwealth by the Bureau of Statistics of Labor.

Chap. 238, Acts. — Provides for the appointment of a board to consider the subject of the unemployed and measures for their relief.

Chap. 285, Acts. — Protects persons, associations, or unions of persons in their labels, trade marks, and forms of advertising.

Chap. 317, Acts. — An Act revising and consolidating the statutes relating to savings banks and institutions for savings.

Chap. 320, Acts. — Relates to instruction in the use of tools and in cooking in the public schools.

Chap. 332, Acts. — Provides for an investigation by the Bureau of Statistics of Labor of the relation of the liquor traffic to crime, pauperism, and insanity.

Chap. 334, Acts. — Provides for a special enumeration of cities and towns in certain cases.

Chap. 341, Acts. — Provides for the better protection of human life in lodging houses in case of fire.

Chap. 342, Acts. — Relates to loans by co-operative banks.

Chap. 437, Acts. — Relates to the intimidation of laborers.

Chap. 451, Acts. — Relates to contracts for prison labor.

Chap. 455, Acts. — Relates to the licensing of plumbers and the supervision of the business of plumbing.

Chap. 460, Acts. — Relates to the employment of prisoners in the manufacture of reed or rattan goods.

Chap. 471, Acts. — Provides for manual training in cities of more than twenty thousand inhabitants.

Machine and Tabulating Division—No. 1.

Chap. 481, Acts. — Relates to the inspection department of the district police and the inspection of buildings.

Chap. 498, Acts. — Relates to the attendance of children in the schools.

Chap. 499, Acts. — Relates to the liability of employers to make compensation for personal injuries suffered by employees in their service.

Chap. 508, Acts. — Regulates the employment of labor.

Chap. 525, Acts. — Relates to itinerant vendors.

Chap. 534, Acts. — Requires specifications to be furnished to persons employed in cotton factories.

Chap. 43, Resolves. — Resolve requiring Bureau of Statistics of Labor to investigate the subject of municipal employment bureaus.

1895. Chap. 129, Acts. — Relates to the employment of labor.

Chap. 144, Acts. — Requires specifications to be furnished to persons employed in cotton, worsted, and woolen factories.

Chap. 228, Acts. — Provides greater security against accidents from electric wires.

Chap. 239, Acts. — Provides that tenement houses in the city of Boston shall have adequate open spaces.

Chap. 290, Acts. — Authorizes the Bureau of Statistics of Labor to print and distribute a bulletin.

Chap. 376, Acts. — Authorizes the appointment of a registrar of labor.

Chap. 404, Acts. — Relates to the approval of sureties on bonds to dissolve mechanics' liens.

Chap. 475, Acts. — Relates to the establishment of textile schools.

Resolutions in favor of uniform hours of labor throughout the United States.

1896. Chap. 9, Acts. — Relates to the decennial census to be taken by the Bureau of Statistics of Labor.

Chap. 241, Acts. — Relates to the weekly payment of wages.

Chap. 334, Acts. — Relates to the weekly payment of wages by contractors.

Chap. 343, Acts. — Regulates the placing of traversing machinery in cotton factories.

Chap. 418, Acts. — Relates to bakeries and persons employed therein.

Chap. 444, Acts. — Facilitates the collection of small debts for manual work or labor performed.

Chap. 449, Acts. — Relates to the employment of laborers in the cities of the Commonwealth.

Chap. 494, Acts. — Relates to the employment of mechanics and laborers on public works.

Resolutions relative to an amendment to the Constitution of the United States enabling Congress to enact laws regulating the hours of labor.

1897. Chap. 52, Resolves. — Provides for a special report on the various methods of employing prisoners on public works and lands.

Chap. 105, Acts. — Makes appropriation for carrying out the provisions of the act relating to the employment of labor in the prisons of the Commonwealth.

Chap. 161, Acts. — Relates to co-operative banks.

Chap. 221, Acts. — Authorizes the city of Boston to establish public gymnasia.

Chap. 235, Acts. — Relates to the Boston Co-operative Building Company.

Chap. 265, Acts. — Relates to the licensing of gas fitters and to the supervision of the business of gas fitting in the city of Boston.

Chap. 273, Acts. — Relates to marking the carrying capacity of lighters or other vessels employed in transporting stone, gravel, or sand.

Chap. 328, Acts. — Relates to the registration by the civil service commissioners of applicants for labor.

Chap. 343, Acts. — Relates to the licensing of conductors, drivers, and despatchers of street cars in the city of Boston.

Chap. 344, Acts. — Relates to the adulteration of food.

Chap. 374, Acts. — Relates to the support of the poor in towns.

Chap. 412, Acts. — Relates to prison labor.

Chap. 416, Acts. — Authorizes actions of tort against gas and electric light corporations for the loss of life by negligence.

Chap. 430, Acts. — Provides for the employment of two special agents in the Bureau of Statistics of Labor, and establishes salaries therein.

Chap. 434, Acts. — Relates to the labor of prisoners in the jails and at the State farm.

Chap. 452, Acts. — Requires street railway companies to enclose the platforms of cars during certain months of the year.

Chap. 480, Acts. — Relates to the employment of prison labor in the industry of cane-seating and in the manufacture of umbrellas.

Chap. 491, Acts. — Relates to the liability of employers to make compensation for personal injuries suffered by employees in their service.

1898. Chap. 68, Acts. — Relates to the decennial census.

Chap. 145, Acts. — Makes an appropriation for the establishment of a textile school in the city of New Bedford.

Chap. 150, Acts. — Relates to the manufacture and sale of clothing made in unhealthy places.

Chap. 167, Acts. — Relates to the inspection of steam boilers.

Chap. 188, Acts. — Women Clerks' Benefit Association of Boston incorporated.

Chap. 233, Acts. — Authorizes the Boston Co-operative Building Company to hold additional real and personal estate.

Chap. 247, Acts. — Relates to co-operative banks.

Chap. 277, Acts. — Relates to the labor of prisoners in jails and houses of correction.

Chap. 307, Acts. — Relates to the employment of prisoners of the Massachusetts Reformatory upon lands and buildings owned by the Commonwealth.

Chap. 334, Acts. — Provides for the employment of prisoners in making goods for the use of the prisons and other public institutions.

Chap. 365, Acts. — Relates to employing prisoners in preparing road material by hand labor.

Chap. 367, Acts. — Authorizes the granting of half-holidays to public employees.

Chap. 393, Acts. — Relates to reclaiming and improving waste and unused land with the labor of prisoners from jails and houses of correction.

Chap. 402, Acts. — Provides for an investigation of Sunday labor.

Chap. 481, Acts. — Extends the operation of the law relative to the weekly payment of wages.

Chap. 494, Acts. — Regulates the employment of labor.

Chap. 505, Acts. — Prohibits deductions in the wages of women and minors employed in manufacturing and mechanical establishments.

Chap. 545, Acts. — Relates to contracts for the conditional sale of personal property.

Chap. 559, Acts. — Relates to poor debtor proceedings.

Chap. 565, Acts. — Relates to the liability of persons and corporations for negligence resulting in the death of persons not in their employ.

Chap. 78, Resolves. — Resolve instructing the Bureau of Statistics of Labor to investigate the subject of labor and co-operative insurance.

Chap. 96, Resolves. — Resolve in favor of the Lowell Textile School.

Resolutions relative to an amendment to the National Constitution enabling Congress to enact laws regulating the hours of labor.

The bureau moved from the Claflin Building, 20 Beacon St., to rooms in the new annex to the State House.

1899. Chap. 199, Acts. — Relates to mechanical and manufacturing corporations.

Chap. 238, Acts. — Relates to collection agencies.

Chap. 246, Acts. — Authorizes the establishment of vacation schools.

Chap. 247, Acts. — Extends the application of the law relative to the weekly payment of wages.

Chap. 299, Acts. — Relates to the establishment of textile schools.

Chap. 300, Acts. — Authorizes the city of Fall River to incur indebtedness for a textile school beyond the limit fixed by law.

Chap. 344, Acts. — Makes eight hours a day's work for city and town employees.

Chap. 359, Acts. — Relates to the registration and protection of labels, trade marks, stamps, and forms of advertisements.

Machine and Tabulating Division—No. 2.

Chap. 368, Acts. — Relates to the licensing of engineers and firemen

Chap. 384, Acts. — Makes an appropriation for the employment of prisoners in making goods for the use of public institutions.

Chap. 394, Acts. — Provides for part payment of taxes and of certain claims against cities and towns.

Chap. 413, Acts. — Relates to the employment of minors.

Chap. 417, Acts. — Provides for the payment of an allowance to families of certain persons not firemen, but who are killed or fatally injured while doing fire duty.

Chap. 468, Acts. — Exempts certain trades unions from the laws relative to fraternal beneficiary organizations.

Chap. 55, Resolves. — In favor of the Lowell Textile School.

Chap. 57, Resolves. — Directs the Board of Railroad Commissioners to investigate and report on the rates charged by railroads within the Commonwealth for the transportation of passengers, bicycles, and baggage.

Chap. 76, Resolves. — Relates to reclaiming and improving waste and unused land with the labor of prisoners from jails and houses of correction.

Chap. 93, Resolves. — Relates to the participation of the Commonwealth in the International Exposition at Paris.

Resolutions relative to the proposed Constitutional amendment giving Congress authority to establish uniform hours of labor in manufactories.

1900. Chap. 50, Acts. — Relates to the establishment of the International Institute for girls in Spain.

Chap. 166, Acts. — Authorizes cities and towns to provide free evening lectures.

Chap. 168, Acts. — Relates to the rate of interest on overdue taxes.

Chap. 171, Acts. — Authorizes the city of Boston to establish and maintain an industrial school.

Chap. 183, Acts. — Authorizes the making of insurance upon the health of individuals.

Chap. 185, Acts. — Permits beneficiary corporations organized under the laws of the Dominion of Canada or any province thereof to transact business in this Commonwealth.

Chap. 191, Acts. — Relates to the trustee process.

Chap. 197, Acts. — Relates to the transportation of scholars of the public schools by street railway companies.

Chap. 201, Acts. — Relates to the licensing of engineers and firemen.

Chap. 218, Acts. — Relates to the length of the school year in certain towns.

Chap. 220, Acts. — Authorizes cities to indemnify police officers and members of fire departments for damages sustained or expenses incurred in the discharge of their duties.

Chap. 223, Acts. — Requires railroad companies to equip their cars with platform gates.

Chap. 237, Acts. — Provides for a public school teachers' retirement fund in the city of Boston.

Chap. 239, Acts. — Provides for an appeal from orders of inspectors of factories and public buildings.

Chap. 246, Acts. — Authorizes cities to pension firemen.

Chap. 256, Acts. — Relates to mechanics' liens for the removal of buildings and other structures.

Chap. 269, Acts. — Relates to the employment of prisoners in making goods for public use.

Chap. 281, Acts. — Relates to the office hours of clerks of police, district, and municipal courts.

Chap. 282, Acts. — Prohibits corporations from requiring bonds of their employees in certain cases.

Chap. 298, Acts. — Relates to passenger fares on certain morning and evening trains on railroads entering the city of Boston.

Chap. 306, Acts. — Relates to the pensioning of members of the police department of the city of Boston.

Chaps. 314, 315, and 322, Acts. — Authorizes certain street railway companies to carry the United States mail, and to act as common carriers of baggage and small parcels of merchandise.

Chap. 325, Acts. — Relates to the manufacture and sale of textile fabrics and papers containing arsenic.

Chap. 335, Acts. — Provides for the protection of human life in the case of fire or panic.

Chap. 349, Acts. — Increases the representation of the city of Lowell in the trustees of the Lowell Textile School corporation.

Chap. 357, Acts. — Relates to the hours of labor for city and town employees.

Chap. 376, Acts. — Relates to the sale of real estate for the payment of taxes.

Chap. 378, Acts. — Relates to the hours of labor of women and minors in mercantile establishments.

Chap. 395, Acts. — Relates to railroad fares in the suburban district of Boston.

Chap. 414, Acts. — Requires street railway companies to enclose the platforms of cars during certain months of the year.

Chap. 425, Acts. — Relates to the hours of labor of employees of county jails and houses of correction.

Chap. 446, Acts. — Extends the time for giving notices under the employers' liability act to 60 days.

Chap. 448, Acts. — Regulates the sale of ice.

Chap. 469, Acts. — Relates to the employment of laborers on public works.

Chap. 470, Acts. — Relates to the weekly payment of wages by the Commonwealth and its officers.

Chap. 22, Resolves. — Resolve to authorize advances of money to the board of Paris Exposition managers.

Chap. 72, Resolves. — In favor of the New Bedford Textile School.

Chap. 73, Resolves. — Resolve to provide for the erection of buildings for the Lowell Textile School.

Chap. 76, Resolves. — In favor of the Lowell Textile School.

Chap. 104, Resolves. — Relative to the Pan-American Exposition to be held in the city of Buffalo, New York.

1901. Chap. 80, Acts. — Relates to Sunday work by bootblacks.

Chap. 106, Acts. — Relates to the employment of convicts on the premises of the State prison.

Chap. 113, Acts. — Requires the posting of time tables in mercantile establishments.

Chap. 164, Acts. — Prohibits the employment of minors under eighteen years of age in the manufacture of certain acids.

Chap. 166, Acts. — Provides for the better protection of workmen on iron or steel framed buildings.

Chap. 370, Acts. — Relates to specifications to be furnished to persons employed in cotton, woolen, and worsted factories.

Chap. 42, Resolves. — In favor of the New Bedford Textile School.

Chap. 70, Resolves. — Resolve to provide for the erection of a building or buildings for the use of the Lowell Textile School.

Chap. 71, Resolves. — In favor of Lowell Textile School.

Chap. 88, Resolves. — In favor of the Bradford Durfee Textile School of Fall River.

1902. Chap. 120, Acts. — Relates to private contributions for the Lowell Textile School.

Chap. 183, Acts. — Relates to the employment of illiterate minors.

Chap. 322, Acts. — Requires manufacturing establishments to supply their employees with pure drinking water during working hours.

Chap. 350, Acts. — Relates to the operation and custody of elevators.

Chap. 384, Acts. — Relates to the time allowed for voting to the employees of certain establishments.

Chap. 430, Acts. — Relates to the insignia of labor unions.

Chap. 435, Acts. — Relates to the employment of women and children in manufacturing and mechanical establishments.

Chap. 437, Acts. — Provides annuities for the widows and minor children of members of police departments of certain cities.

Chap. 450, Acts. — Relates to the payment of wages.

Chap. 494, Acts. — Provides for the appointment of additional commissioners to further the adoption by the States of a uniform law making eight hours a legal day's labor.

Machine and Tabulating Division—No. 3.

Chap. 21, Resolves. — In favor of the Lowell Textile School.

Chap. 45, Resolves. — Resolve to authorize the Bureau of Statistics of Labor to print and distribute two thousand copies of the laws relating to labor.

Chap. 79, Resolves. — In favor of the New Bedford Textile School.

Resolutions relative to an amendment to the Constitution of the United States enabling Congress to enact laws regulating hours of labor.

1903. Chap. 134, Acts. — Relates to the equipment of certain cars of street railway companies.

Chap. 275, Acts. — Relates to the registration of the insignia, ribbons, rosettes, or buttons of labor unions.

Chap. 301, Acts. — Relates to ways of egress from buildings in the city of Boston.

Chap. 332, Acts. — Relates to certain fraternal beneficiary corporations.

Chap. 475, Acts. — Requires the use of fans or blowers in all places where emery or buffing wheels or belts are used.

Chap. 19, Resolves. — In favor of the New Bedford Textile School.

Chap. 20, Resolves. — In favor of the Bradford Durfee Textile School of Fall River.

Chap. 21, Resolves. — In favor of Lowell Textile School.

Chap. 70, Resolves. — Resolve to direct the Bureau of Statistics of Labor to consider the expediency of establishing free employment offices.

Chap. 81, Resolves. — Resolve relative to the reclamation of waste or unused land by the labor of prisoners.

Chap. 87, Resolves. — Resolve to provide for the appointment of a committee to consider and report on the laws concerning the legal relations between employers and employees.

Horace G. Wadlin resigned as chief of the Bureau of Statistics of Labor. Charles F. Pidgin appointed as his successor. Frank H. Drown appointed first clerk, and William G. Grundy second clerk.

The chief of the bureau recommended that the bureau be authorized to print a monthly report to be entitled The Labor and Industrial Report of the Commonwealth of Massachusetts, in place of the annual Bureau report, Annual Statistics of Manufactures, and the quarterly Labor Bulletin.

PUBLICATIONS OF THE BUREAU.

Digest of Bureau Reports: By Subjects.

Abandoned farms in Massachusetts — *1890*.

Accidents — *1872*.

Agricultural labor — *1870*.

Annual report of the Chief to the legislature — *1902*.

Appendix: containing replies to blanks, extracts therefrom, testimony and remarks, with statistical tables; summary of laws relating to labor, and catalogue of books upon labor — *1870*.

Appendix: history of the Bureau of Statistics of Labor, and of labor legislation in Massachusetts, 1833–1876 — *1876*.

Art in industry — *1886*.

Canadian French in New England — *1882*.

Changes in conducting retail trade in Boston, since 1874 — *1899*.

Children in factories — *1871*.

Children in factories, their employment and schooling — *1870*.

Chinese labor — *1872*.

Citizens and aliens — *1888*.

Citizenship — *1882*.

Classified weekly wages — *1889*.

Combination — *1871*.

Combination by guilds — *1871*.

Combinations by trades-unions — *1871*.

Comparative condition of manufactures and labor, 1875 and 1877 — *1878*.
Comparative prices and cost of living: 1860-1883. Massachusetts and Great Britain — *1884*.
Comparative rates of wages and hours of labor in Massachusetts and foreign countries — *1874*.
Comparative table showing cost of groceries, provisions, and articles of clothing and dry goods in 1861 and 1873 — *1874*.
Comparative wages: 1860-1883; Massachusetts and Great Britain — *1884*.
Comparative wages and prices: 1860-1883; Massachusetts and Great Britain — *1885*.
Comparative wages and prices, 1860-1897 — *1897*.
Compensation in certain occupations of graduates of colleges for women — *1894*.
Condition of employés — *1889*.
Condition of operatives in factory towns — *1872*.
Condition of textile fabric manufactories in Massachusetts, and digest of laws relative to machinery and sanitary matters — *1874*.
Condition of workingmen — *1898*, *1899*.
Condition of workingmen's families — *1875*.
Conjugal condition, nativities, and ages of married women and mothers — *1878*.
Convict labor — *1879*, *1880*.
Co-operation — *1871*, *1873*, *1875*, *1877*.
Co-operative distribution in Great Britain — *1886*.
Cost of living — *1871*, *1872*, *1873*, *1874*.
Cotton manufacturing — *1870*.
Daily working time — *1889*.
Distribution of wealth; probates — *1894*.
Divorces in Massachusetts, 1860-1878 — *1880*.
Early factory labor in New England — *1883*.
Education — *1873*.
Education and employment of young persons and children, and digest of American and European laws relative to the subject — *1874*.
Education and half-time schools — *1872*.
Education and labor of the young: the half-time system — *1878*.
Education of working children — *1875*.
Employers' liability for personal injuries to their employés — *1883*.
Factory legislation — *1875*.
Factory system — *1870*.
Facts bearing on the ten-hour argument — *1871*.
Fall River, Lowell, and Lawrence — *1882*.
Food consumption. Quantities, cost, and nutrients of food materials — *1886*.
Foreign statistics and opinions — *1879*.
Friendly societies — *1871*.
Graded prices: Massachusetts, other United States, and foreign countries, 1816-1891 — *1900*.
Graded weekly wages — *1895*, *1896*, *1897*, *1898*.
Growth of manufactures — *1878*, *1889*.
Half-time schools — *1871*.
Health statistics of female college graduates — *1885*.
Historical review of wages and prices: 1752-1860 — *1885*.
Homes for women — *1874*.
Homes of low-paid laborers in the city of Boston — *1870*.
Homes of the middle class — *1870*.
Homes of the working classes — *1872*.
Hours of factory labor — *1871*.
Hours of labor — *1871*, *1872*, *1873*, *1879*, *1898*, *1899*, * *1901*, † *1902*.

* For 1900 and nine months of 1901.

† For year ending Sept. 30, 1902.

Bulletin and Chronology Divisions and Special Agents.

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Increase in wages in cotton, woollen, and worsted mills; 1861 compared with 1873 — *1874.*
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Industrial arbitration and conciliation — *1881.*
Industrial arbitration and conciliation in England and Massachusetts — *1877.*
Influence of intemperance upon crime — *1881.*
Insurance of workingmen — *1900.*
Intemperance — *1870, 1871.*
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Labor and legislation in Massachusetts — *1870.*
Labor chronology — *1893, 1894, 1895, 1896, 1897, 1898, 1899,* * *1901,* † *1902.*
Labor laws of Massachusetts — *1890, 1901.*
Labor legislation — *1879, 1899,* * *1901.*
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Markets, transportation, imports, exports, and competition — *1889.*
Massachusetts manufactories: persons employed in each story, and their means of escape in case of fire — *1877.*
Memorial, Henry Kemble Oliver — *1886.*
Mercantile wages and salaries — *1902.*
Motive power of Massachusetts; or, the labor of the sun — *1877.*
Nativities, ages, and illiteracy of farmers, farm laborers, skilled workmen in manufactures and mechanical industries, and unskilled laborers — *1878.*
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Origin and development of industrial questions — *1870.*
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Prices and the cost of living — *1901.*
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Profits and earnings: 2,440 establishments — *1883.*
Profit sharing — *1886.*
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Relation of wages to the cost of production — *1889.*
Relative importance of private establishments and corporations in manufacturing industries — *1878.*
Relative to professional men — *1874.*
Salary receivers (9,554 "individual" returns) — *1876.*
Sanitary condition of working people in their homes and employments — *1874.*
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School savings banks — *1879.*
Schools for factory children — *1872.*
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Social and industrial changes in the county of Barnstable — *1896.*
Social life of workingmen — *1880.*
Special effects of certain forms of employment upon female health — *1875.*

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† For year ending Sept. 30, 1902.

Statements and experiences of workingmen — *1871.*
Statistics of crime: 1860-1879 — *1880.*
Statistics of drunkenness and liquor selling: 1870-1879 — *1881.*
Statistics of drunkenness and liquor selling under prohibitory and license legislation: 1874 and 1877 — *1879.*
Statistics relating to Massachusetts from the United States Census of 1870 — *1874.*
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Tenement house census of Boston — *1891, 1892.*
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Testimony at hearings before the Bureau — *1870.*
Testimony of workingmen — *1879.*
The afflicted classes: blind, deaf, dumb, idiotic, and insane — *1877.*
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The unemployed; from the State Census of 1885 — *1887.*
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Workingmen's social and industrial benefits — * *1901,* † *1902.*
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Busy season, the: by industries. 1889, 1890 — *1890.*
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Days in Operation: by industries *1886 1902.*
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Goods made, comparison of; same establishments; for the years, 1886, 1890 — *1890.*

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Industrial chronology. *1890-1902.*

Manufactures, general statistics of: by industries, *1886-1890.*

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Co-operative banks.
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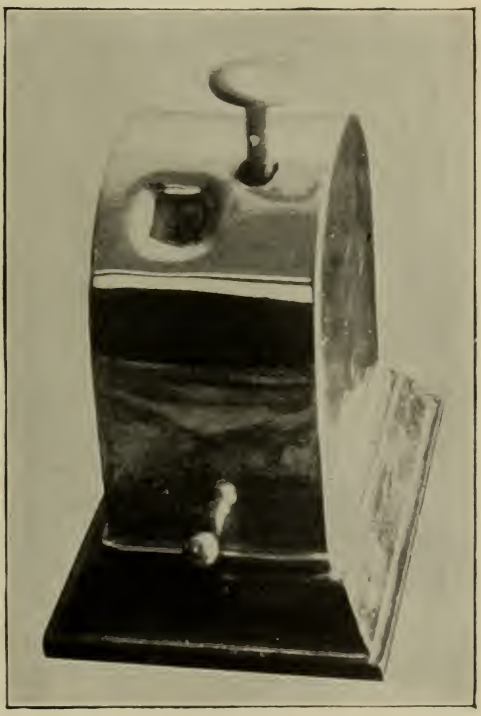
Methods of Work.

Machines and Devices the Work of Evolution, The.

In the Census of 1875 the inventor introduced a tally sheet known as the "Self-Counting Tally Sheet." This was used for the population statistics, while a similar form, based on the disintegration of numbers, was used for the aggregation of statistics of manufactures, agriculture, etc., where numbers were to be added. No machinery was used in this census.

In 1882, after his return from Washington, he invented a mechanical adding machine, which was used in the preparation of the special volume of Massachusetts statistics, previously referred to. This machine led to the invention of the electrical adding machine, which was used in the State Census of 1885. In this census was also used a tabulating machine for handling the statistics of population. In this census the basis of tabulation was a punch card, and a pin board was used, so called because it was fitted with steel pins which passed through the punched holes in the cards and indicated their classification. This punch card was a legible card, that is, it was printed with certain figures and abbreviations. After punching, the card was legible because the meaning of the punched hole could be ascertained by its propinquity to spaces not punched. To illustrate: As the letters S, M, W, D, indicate the four grades of conjugal condition, single, married, widowed, and divorced, if the M were punched out, the card was legible because it was known that the M came between the S and W.

The counter used in the Census of 1885, supplied by a New York manufacturer, was found to be unreliable, and in the Census of 1895 the inventor introduced a counter which has fulfilled all his expectations.



The Addition Register.

In the Census of 1885 and that of 1895 the statistics calling for the aggregation of large numbers have been compiled by the aid of the electrical adding machine. This machine is now used for multiplication. In 1885 and also in 1895, the system of multiple addition, known as "The Chip System," has been used for the aggregation of smaller numbers, such as are found in the statistics of agriculture, the fisheries, etc.

His latest additions to his series of statistical inventions include the Addition Register, the Schedule Holder, the Pin Board Electrical Tabulating System, and the Electrical Typewriter Tabulator. A brief description of each of these devices and inventions is given hereinafter.

Addition Register, The.

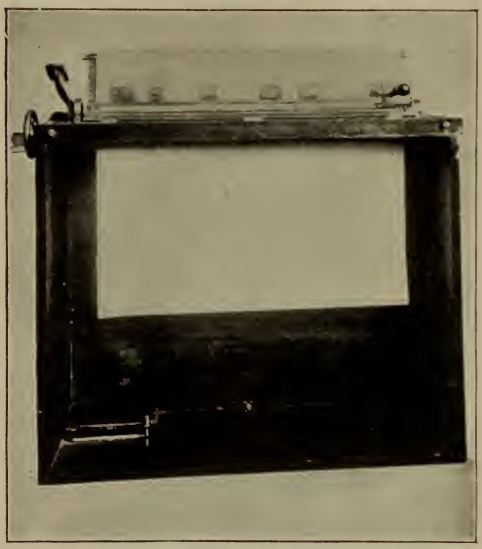
This is a simple machine which may be carried in the pocket, and is intended for the use of bookkeepers and clerks who are called upon to add long columns of figures. It dispenses with the brain-wearying work of carrying, and enables a person to work all day at work of this kind without that deleterious effect upon the nerves which comes from close attention to such work.

Self-Counting Tally Sheet, The.

This is a printed and ruled form which, as its name implies, supplies its own total, or series of totals, as soon as the process of checking or tallying is completed.

Convertible Schedule, The.

When large schedules are used containing a great number of names it has been found necessary, in order to secure the best results in tabulation, to transfer by punching, stamping, or writing to a card or slip of paper. The convertible schedule allows the use of the large schedule and also supplies a means of tabulating directly from the schedule without the aid of any means of transference.



The Schedule Holder.

Schedule Holder, The.

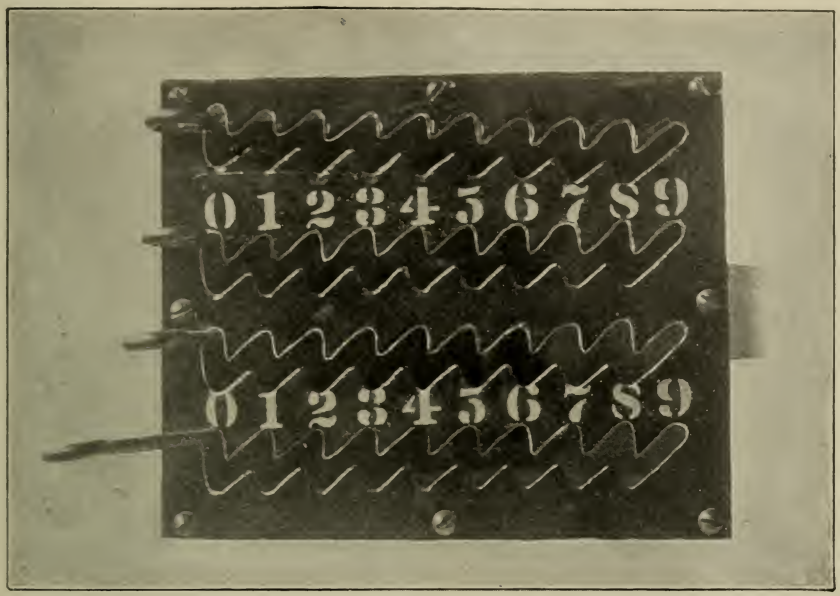
The transference of information from a large sheet of paper containing closely written figures is always trying to the eyes and nerves, owing to the close application found necessary in order to keep to the line. The Schedule Holder is intended to reduce this trying effect upon the nerves and eyes to the minimum.

It is arranged so that the sheet of paper, of whatever size, passes between rollers at a convenient distance from the eye, which distance may be easily regulated. A suitable device allows the schedule or sheet of paper to be lifted a definite distance each time that this device is touched. A metal rule goes across the sheet, attracting attention to the line under consideration. If it is desired to cover part of the line so that the eye will see only that part of the information that is to be used, there are suitable devices to accomplish this purpose. An important part of the Schedule Holder is the registry stamp, which stamps upon the schedule in perpendicular columns a sign indicating that each line has been tabulated for each tabulation.

Automatic Multiple Counting or Tabulating Machine, The.

This machine was used in compiling the population statistics of the Massachusetts State Census of 1895. It is elastic in its scope, giving a condensed classification, if that is desired, or the most

complete detail, if that should be preferred. It works directly from the original schedule if a card is used. If a written schedule is used, the transfer process can be made available, by which all the facts contained upon the written sheet may be transferred to the registry form by means of stamping. All the details of a census, covering from 25 to 30 records for each individual, may be transferred to these registry forms at an average rate of 400 per hour, or 2,800 complete registries per



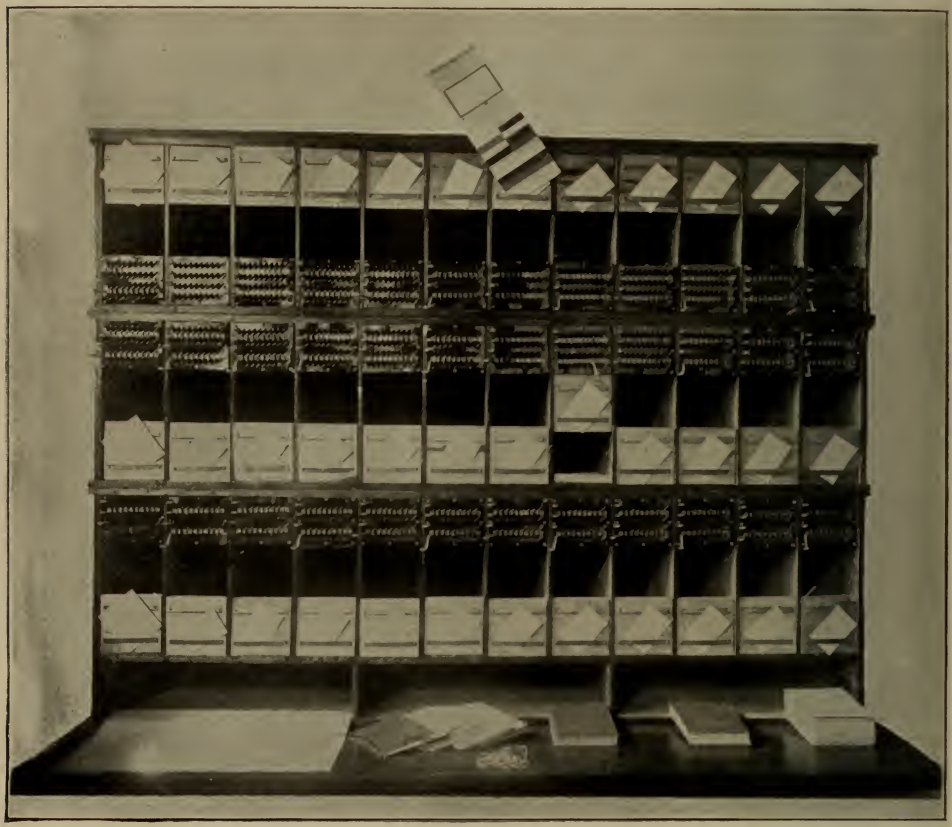
The Counter for the Automatic Multiple Counting or Tabulating System.

day of seven hours. This will be found to be fully four times as fast as any other system of transferring yet devised. The result is a legible registry form which may be read by the clerk or by any person acquainted with statistical tabulation.

The automatic system requires that the cards or registry forms should pass through four tabulations. In the first is secured sex, native born and foreign born, 14 age periods for both native and foreign born, nine details of color and race, and five details of conjugal condition. The result of this tabulation is 2,880 possible totals, which is far in excess of any system of combinations or correlations which can be secured by any other system. The process of tabulation is cumulative; that is, when we pass to the second tabulation, and secure the classification of relation to head of family, age detail (by months and years), and illiteracy, it is secured subject to the preceding classifications of sex, native and foreign born, age periods, color and race, and conjugal condition. The permutations in this tabulation become so numerous that it is impossible to count them. So in the third tabulation, which supplies details for place of birth, parent nativity, length of residence, and aliens, the correlations previously secured in the first and second tabulations are extended over the third, and the results of the third tabulation are cumulative as regards the fourth tabulation, which covers statistics of occupations, and of employment and unemployment.

A wrong impression is often conveyed to parties considering this system, who think that the

details supplied are so numerous that it must add largely to the expense of the work and the time occupied in tabulation; but this is an erroneous conclusion. The fact is that no combinations should be made by the tabulator. The work of tabulation should always be done in detail; then those in charge of the preparation of copy can easily make the necessary condensations, and the results may be presented in the most compact manner desired. But the clerk in charge of the prep-

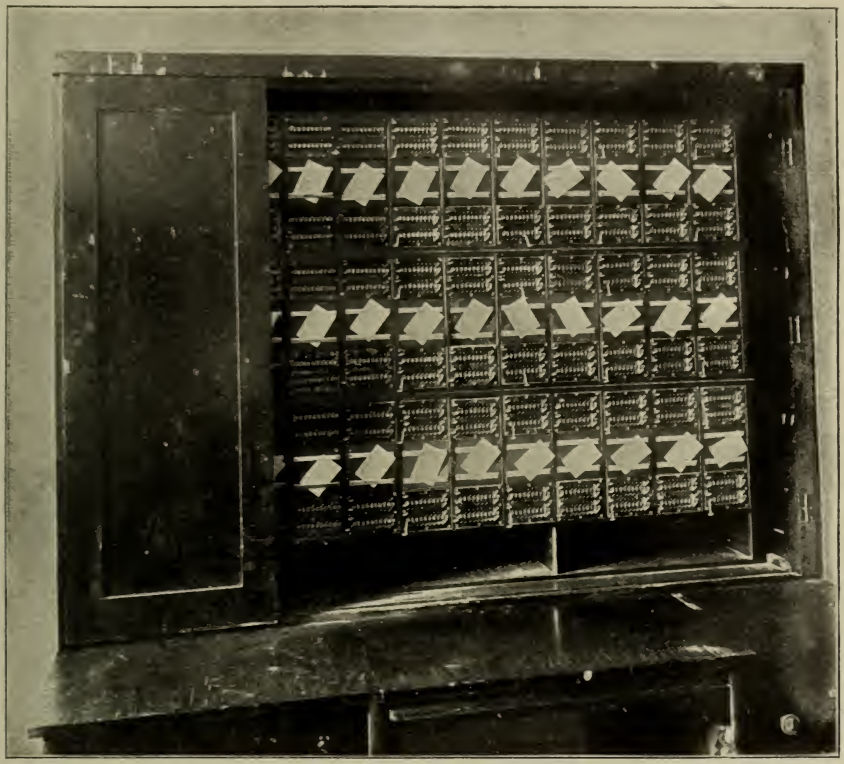


Automatic Multiple Counting or Tabulating Machine (36 counters).

aration of copy knows the composition of the details and is able to explain the exceptions to the rule, which are often the most important part of statistical tabulations.

A record of the progress of tabulation in the automatic system was kept by means of a chromatic card printed in colors. The first tabulation was called the blue tabulation; the second, the red; the third, the green; and the fourth handling, the black. As each tabulation was completed, the proper tag was cut from the file card, marked with the name of the clerk doing the work and date of completion, and was then sent to the Copy Division, where a record was kept of the com-

pletion of the 5,500 tabulation districts in the Census. On another part of the file card was entered the name of the clerk doing the work and the date of completion, thus enabling the location of errors and the attributing of them to the person who made them.



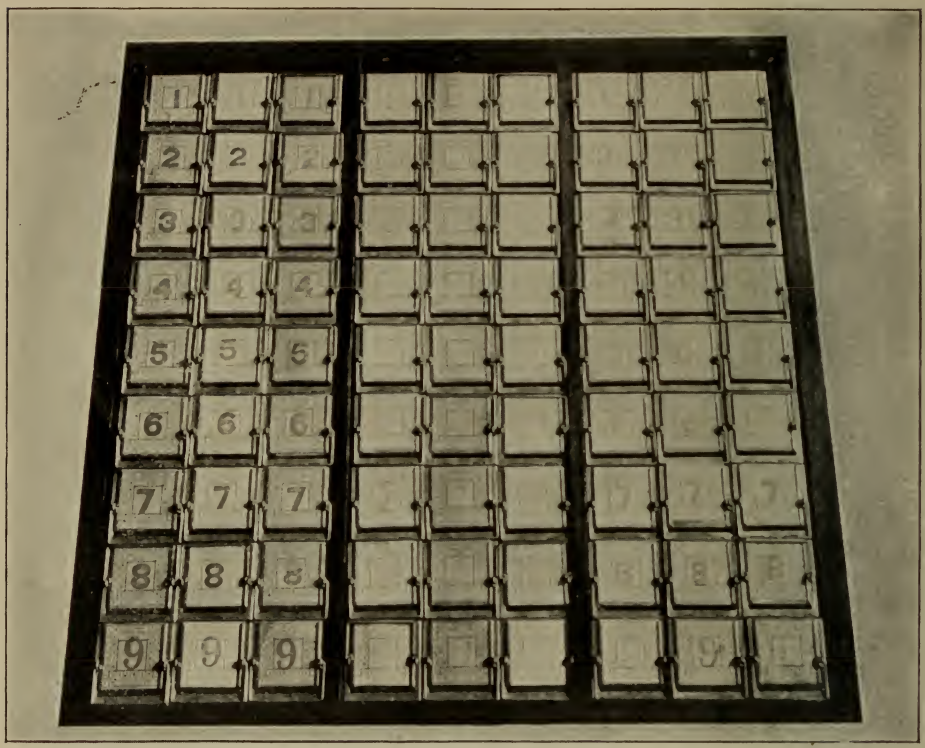
Automatic Multiple Counting or Tabulating Machine (72 counters).

By the automatic system, if an error is made in the first tabulation it is almost invariably disclosed in the second tabulation, and so on, each tabulation correcting the previous one. An effort was made, and it was successful, to make the counting of the population and the facts connected therewith mathematically correct, and there was found to be no need of the perpetuation of errors made in one tabulation.

Multiple Adding or Chip System, The.

This system is for the addition of comparatively small numbers where a great number of totals are desired. Its capacity is from units to hundreds of millions. Colors are used to indicate units, tens, hundreds, etc. The digits are marked in such a way that 9's may not be mistaken for 6's, and the results of color blindness are avoided by a peculiar combination of contrasting colors.

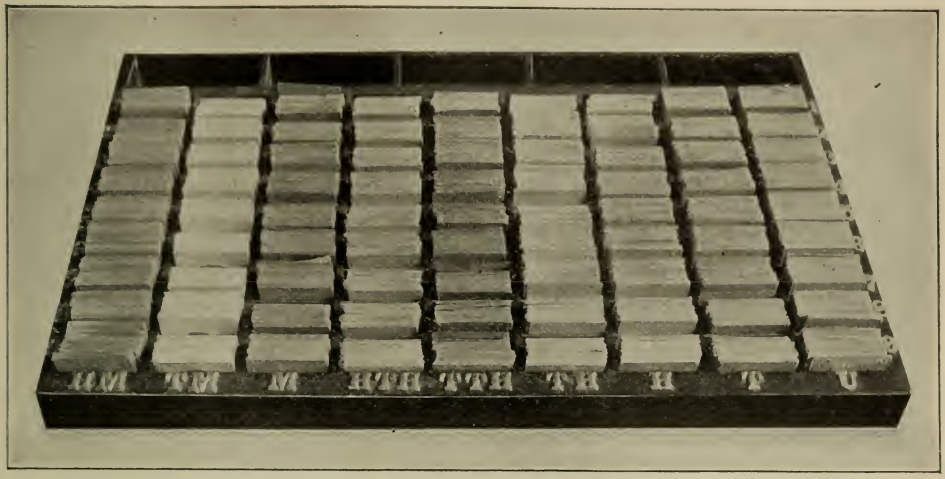
The operator takes the chips from a case, in a manner similar to the compositor taking type from a type case. By this process of adding from 144 to 200 columns may be added at a time, the only result slip needed being one for totals.



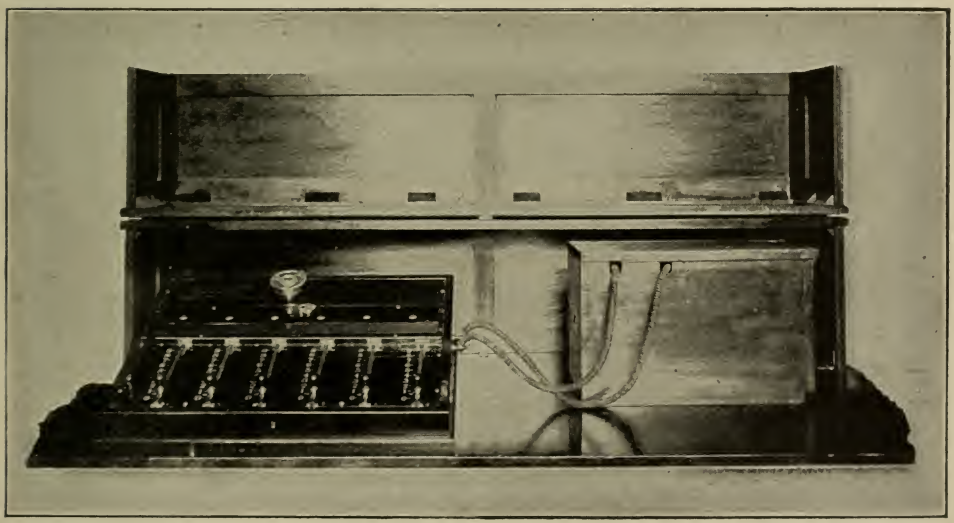
Chip Sorting Box for the Multiple Adding or Chip System.

The chips are counted on the typewriter tabulator, being sorted at the same time that they are counted. In this work the speed attained upon the typewriter will be rivaled by the typewriter tabulator, for the chips can be counted and sorted at the rate of at least 88,000 per day of seven hours. A sorting box is placed at the left of the operator, and the cards as soon as sorted are available for immediate use in the work of chipping.

As stated previously, the errors in transference of facts from a schedule to another sheet upon which the figures are recorded come from the second thought of the operator. In the chip system the chips are selected in accordance with the first or correct thought of the operator, and the chips cannot change their color or relative value in their progress to the sorting box. In this way reversals of numbers or incorrect transference are avoided, and absolute mathematical accuracy may be secured in this class of work by the use of the chip system.



Chip Case for the Multiple Adding or Chip System.



The Electrical Adding and Multiplying Machine.

Electrical Adding and Multiplying Machine, The.

This machine may be made any size; that is, it can cover millions, billions, or trillions in capacity. It is operated by sliding keys. The great advantage of the machine for statistical work comes from the fact that the number may be set and read by the clerk before the addition is completed. The majority of errors in statistical aggregation comes from the transference from the original schedule to the ruled form upon which the figures are entered. The first thought of the clerk as the numbers are read is correct, but during the progress of transference the second thought often intervenes, and it is this second thought which causes the reversal of numbers or the dropping of figures. The clerk who works on the adding machine registers the first thought, and is able to compare the registered number on the machine with the original schedule before completing the addition. In this way absolute mathematical accuracy is secured by the work performed by this machine.

The process of multiplying upon this machine takes about one-half of the time consumed in ordinary multiplication. There is no "brain fag" resulting from the use of this machine in either addition or multiplication. The work in addition consists simply of notation, or the writing of the numbers upon the machine by means of the sliding keys; while in multiplication no carrying has to be done by the operator, as that work is performed by the electrical operation of the machine.

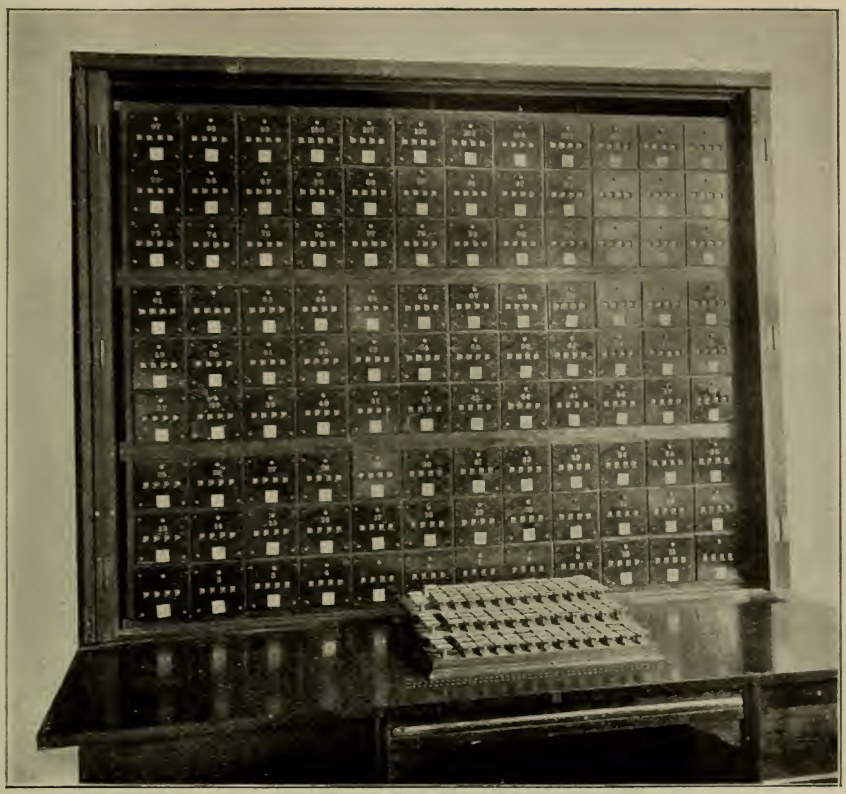
Electrical Typewriter Tabulator, The.

This machine, which is the latest work of the inventor, does not "look" like a typewriter, but it is an actual typewriter tabulator. It has 108 counting machines, which automatically adjust themselves at zero by a simple process after the results have been taken down from each counting box upon the result sheet. It has 108 keys operating electrically, and 21 index keys which are a guide to the tabulation.

This machine is intended to work directly from the schedule without the intervention or aid of any system of transference. There are no intermediate processes between the reading of the schedule and the recording of the fact or combination of facts; there are no cards to be punched, which cards have to be indexed and packed away; nor is any form of registry slip, whether written or stamped, required. The thought of the clerk is immediately registered on the machine, and by its system of correlation from four to five hundred results can be secured at each handling of the schedules, which is many times more than has been secured by any other system. The electrical connections are always fixed; that is, key number one always operates counter number one, key 27 always operates counter 27, etc. The correlations are made by means of the index and tabulating keys. Thus, if it is desired to record the correlated fact that the person is a male, is native born, is white, is single, and is 20 to 29 years of age, these correlated facts are indicated by one touch of the key.

The possible speed of this key is 350 tallies per minute, or 2,100 per hour; but this speed would never be secured in actual statistical work. The average speed of a typewriter, one necessary to secure a diploma of efficiency, is 35 words per minute, averaging six letters to a word, or 210 blows or registries on the typewriter. If the typewriter tabulator is operated as fast as this, the result would be 12,600 registries per hour, or 88,200 in a day of seven hours. If we reduce this estimate by one-half, that is, require the typewriter tabulator to be run at one-half the speed considered a fair rate upon the typewriter, we secure an average of 44,100 tallies per day of seven hours, or 6,300 registries per hour, which is 105 per minute.

A set of correlated scheme sheets are used in connection with the typewriter tabulator, which will give a condensed series of results, or as expansive a series of results as may be required.



The Electrical Typewriter Tabulator (108 counters).

Pin Board Electrical Tabulating System, The.

This system is an evolution of the pin board previously referred to, but the mechanical and electrical features are of recent invention. This system works in a number of ways by means of a correlated registry form. This is divided into seven or any other suitable number of sections, each containing opportunities for registering 108 points. The seven registry forms have a capacity of 756 points, but the correlations obtained from these are innumerable, covering every possible combination that may be desired in the way of population and sociological statistics.

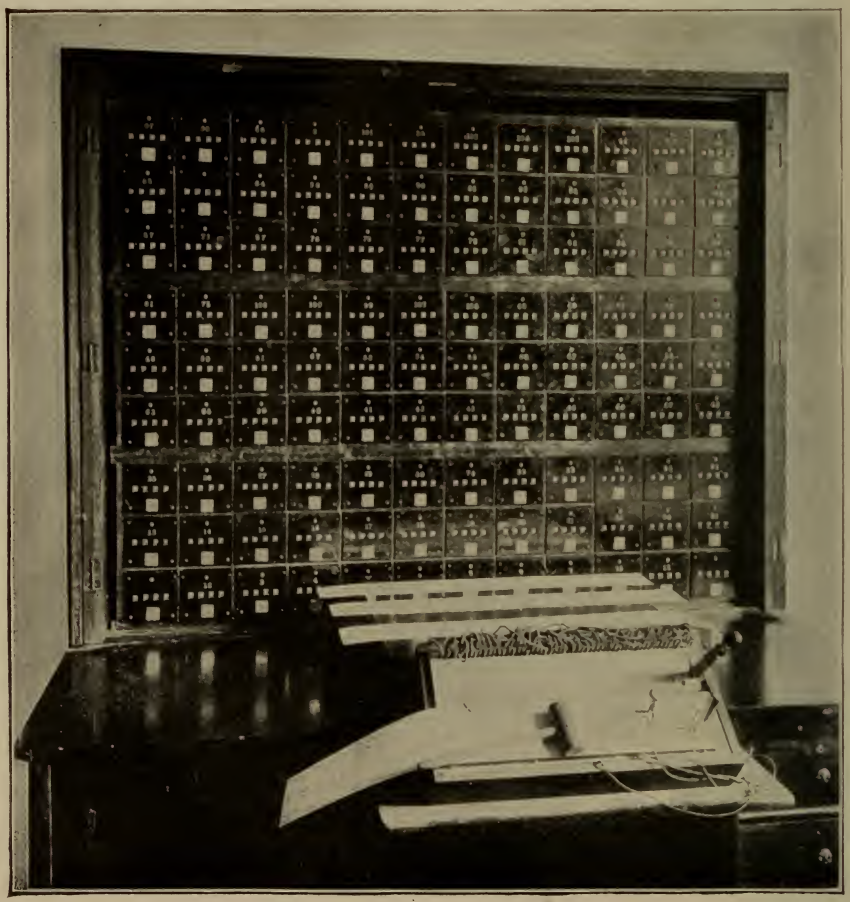
First, this system can work directly from the written schedule; second, it can also work from a stamped registry form; third, a card punched by hand or by other means may be brought to this machine and tabulated; while a fourth plan comprehends the punching of the card and its counting at the same time. It is not necessary in this system to have a separate device for punching and a separate machine for counting. In this machine at the same time that the punch hole is made the counting is done, so that when the punching of a number of cards is completed, the count of the statistical facts upon those cards can be immediately taken off from the counting boxes.

This, it is evident, is a marked advance in the line of tabulation of punch cards, for it substitutes one process for two.

The machine is small and comparatively inexpensive, and can be made available for all forms of statistical work. The operation of the machine is easy, requiring the expenditure of no strength, and not obliging the clerk to assume an uncomfortable position and to go through thousands of wearying motions of the arms in the course of a day's work.

The great advantage of the correlated registry form is that after the tabulation of each section of the card is completed, the card may be thrown away. Thus the keeping of from 30,000 to 40,000 boxes of cards for purposes of future tabulation is obviated, and the great expense of their care, transportation, and indexing is avoided.

Each pin board is supplied with a small cutting machine, with which the clerk cuts off the useless card after having completed its tabulation.



The Pin Board Electrical Tabulating System (108 counters).

Electrical Typewriter Adding Machine, The.

This invention consists of an adding machine, small in size, portable, adding to hundreds of millions, operated by electricity. The machine can be attached to any typewriter having a "plunger" key. When the key is struck for printing the number is added simultaneously in the proper column. Any number of adding machines can be connected with the same typewriter and numbers printed and added in any number of perpendicular columns. The machine will add horizontally, also. It can be arranged for English money, apothecaries' weight, avoirdupois, or any reduction table. When used for addition simply, a portable typewriter, with figures only, will do all that is now accomplished by larger and more expensive machines.

Machine Desks.

For the Electrical Adding and Multiplying Machine, the Pin Board Electrical Tabulating System, the Electrical Typewriter Tabulator, the Automatic Multiple Counting or Tabulating Machine, and the Multiple Adding or Chip System, each clerk is supplied with a desk specially devised and arranged for the work to be performed.

The desks are provided with drawers, which cover up the counting machines, and which may be locked at night by the clerk. The Electrical Adding and Multiplying Machine may be locked up in its own case. In addition to this, it has a locking rod, by which the keys may be locked so as to prevent interference therewith when the clerk is at dinner or away from the desk. The dials may also be covered and locked to protect them from unauthorized inspection.

The desks contain drawers fitted with sorting boxes, and there is a compartment for the schedule holder and for the chip sorting box.

The keyboard of the Electrical Typewriter Tabulator may be covered and locked. In fact, in all the systems as much and often more attention has been paid to the comfort and protection of the clerk as to the invention of the machines and devices. For the fact is appreciated that the rapidity and accuracy of statistical work depend fully as much upon the adjuncts to secure the comfort and convenience of the clerk as upon the purely mechanical and electrical devices whose office is simply to record the brain thought of the operator. In other words, it has always been considered that the clerk is the master of the machine, and not that the machine is the master of the clerk.

Index to Statistical Diagrams.

[The Statistical Diagrams, or Charts, enumerated below, are contained in the Cabinets which form a part of the Exhibit of the Bureau.]

Population and Social Statistics. [Nos. 1–12.]

No. 1. — Population: From the Twelfth Census of the United States, 1900. Males, 1,367,474 (49 per cent); Females, 1,437,872 (51 per cent); Total Population, 2,805,346. Native and Foreign Born.

No. 2. — Population: From the Massachusetts Decennial Census, 1895. Color and Race: By Sex; White, Colored, Indian, Japanese, and Chinese (males and females).

No. 3. — Population: From the Twelfth Census of the United States, 1900. Males, 1,367,474 (49 per cent); Females, 1,437,872 (51 per cent); Total Population, 2,805,346. Sex and Conjugal Condition; Single, Married, Widowed, and Divorced.

No. 4. — Illiteracy: From the Twelfth Census of the United States, 1900. Persons Ten Years of Age and Over: Literate (males and females); Illiterate (males and females).

No. 5. — Illiteracy: From the Twelfth Census of the United States, 1900. Persons Ten Years of Age and Over: Literate (native born and foreign born); Illiterate (native born and foreign born).

No. 6. — Women in Industry: From the Massachusetts Decennial Census, 1895. Total Number of Persons Employed in Productive Industries, 1,079,090 (males and females); Females, 292,636 (27 + per cent).

No. 7. — Women in Industry: From the Massachusetts Decennial Census, 1895. Total Number Employed in Productive Industries, 292,636.

No. 8. — Women in Industry. From the Massachusetts Decennial Census, 1895. Branches of Occupation in which Employed; Men Only, Women Only, and Both Sexes.

No. 9. — Employment of Women: From the Massachusetts Censuses of 1885 and 1895; Comparisons for Years Mentioned.

No. 10. — Defective Social and Physical Condition: From the Massachusetts Decennial Census, 1895. Total Population, 2,500,183; Defective Social and Physical Condition, 65,759; Persons Socially Defective Only; Physically Defective Only; or Socially and Physically Defective.

No. 11. — The Socially and Physically Defective: From the Massachusetts Decennial Census, 1895. The Social or Physical Condition Specified; Other Social or Physical Defects in Combination Therewith.

No. 12. — The Socially and Physically Defective: From the Massachusetts Decennial Census, 1895. Total Population, 2,500,183. Number of Prisoners, Convicts, Homeless Minors, and Paupers, as Compared with Total Population.

Productive Industries. [Nos. 13, 14.]

No. 13. — Productive Industries: From the Massachusetts Decennial Census, 1895. Manufactures, Agriculture (including Mines, Quarries, Pits, etc.), Fisheries, and Commerce. Total Value of Product, $917,730,197.

No. 14. — Capital Invested in Productive Industries: From the Massachusetts Decennial Census, 1895. Manufactures, Agriculture (including Mines, Quarries, Pits, etc.), Fisheries, and Commerce.

Manufactures. [Nos. 15–21.]

No. 15. — Manufactures: From the Massachusetts Decennial Census, 1895. The Nine Principal Industries.

No. 16. — Manufactures: From the Massachusetts Decennial Census, 1895. Twenty-one Principal Industries.

No. 17. — Growth of Massachusetts Manufactures: 1875-1900. Value of Goods Made.

No. 18. — Net Profits in Manufacturing Industries: From the Twelfth Census of the United States, 1900. Value of Goods Made, $1,035,198,989; Total Capital Invested, $823,264,287.

No. 19. — Average Annual Industry Product Per Employee: From the Annual Statistics of Manufactures, 1902. Boots and Shoes: 1890–1902.

No. 20. — Average Annual Industry Product Per Employee: From the Annual Statistics of Manufactures, 1902. Cotton Goods: 1890–1902.

No. 21. — Average Annual Industry Product Per Employee: From the Annual Statistics of Manufactures, 1902. All Industries: 1890–1902.

WAGES AND EARNINGS. [Nos. 22–39.]

No. 22. — Classified Weekly Wages: From the Annual Statistics of Manufactures, 1902. Adult Males.

No. 23. — Classified Weekly Wages: From the Annual Statistics of Manufactures, 1902. Adult Females.

No. 24. — Classified Weekly Wages: From the Annual Statistics of Manufactures, 1902. Young Persons (Both Sexes).

No. 25. — Classified Weekly Wages: From the Annual Statistics of Manufactures, 1902. Totals (Both Sexes; All Ages).

No. 26. — Estimated Average Yearly Earnings: From the Annual Statistics of Manufactures, 1902. Males, Females, Young Persons: Boots and Shoes (factory product); Carpetings; Cotton Goods (woven).

No. 27. — Estimated Average Yearly Earnings: From the Annual Statistics of Manufactures, 1902. Males, Females, Young Persons: Cotton Yarn and Thread; Leather; Machines and Machinery.

No. 28. — Estimated Average Yearly Earnings: From the Annual Statistics of Manufactures, 1902. Males, Females, Young Persons: Metals and Metallic Goods; Paper; Woolen Goods (woven goods and yarn).

No. 29. — Estimated Average Yearly Earnings: From the Annual Statistics of Manufactures, 1902. Males, Females, Young Persons: Woolen Goods (shoddy, waste, etc.); Worsted Goods; All Industries.

No. 30. — Average Actual Yearly Earnings (Manufactures): From Massachusetts Labor Bulletin No. 28, 1903. Boots and Shoes: 1890-1902. Average Yearly Earnings, $513.76; Males, 31,221; Females, 11,547; Both Sexes, 42,768.

No. 31. — Average Actual Yearly Earnings (Manufactures): From Massachusetts Labor Bulletin No. 28, 1903. Carpetings: 1890-1902. Average Yearly Earnings, $360.86; Males, 2,025; Females, 2,378; Both Sexes, 4,403.

No. 32. — Average Actual Yearly Earnings (Manufactures): From Massachusetts Labor Bulletin No. 28, 1903. Cotton Goods: 1890-1902. Average Yearly Earnings, $335.44; Males, 33,395; Females, 37,659; Both Sexes, 71,054.

No. 33. — Average Actual Yearly Earnings (Manufactures): From Massachusetts Labor Bulletin No. 28, 1903. Leather: 1890-1902. Average Yearly Earnings, $516.90; Males, 5,953; Females, 121; Both Sexes, 6,074.

No. 34. — Average Actual Yearly Earnings (Manufactures): From Massachusetts Labor Bulletin No. 28, 1903. Machines and Machinery: 1890-1902. Average Yearly Earnings, $531.35; Males, 13,623; Females, 138; Both Sexes, 13,761.

No. 35. — Average Actual Yearly Earnings (Manufactures): From Massachusetts Labor Bulletin No. 28, 1903. Metals and Metallic Goods: 1890-1902. Average Yearly Earnings, $530.62; Males, 15,876; Females, 1,764; Both Sexes, 17,640.

No. 36. — Average Actual Yearly Earnings (Manufactures): From Massachusetts Labor Bulletin No. 28, 1903. Paper: 1890-1902. Average Yearly Earnings, $415.88; Males, 4,369; Females, 3,433; Both Sexes, 7,802.

No. 37. — Average Actual Yearly Earnings (Manufactures): From Massachusetts Labor Bulletin No. 28, 1903. Woolen Goods: 1890-1902. Average Yearly Earnings, $368.89; Males, 9,577; Females, 5,625; Both Sexes, 15,202.

No. 38. — Average Actual Yearly Earnings (Manufactures): From Massachusetts Labor Bulletin No. 28, 1903. Worsted Goods: 1890-1902. Average Yearly Earnings, $371.34; Males, 2,872; Females, 3,238; Both Sexes, 6,110.

No. 39. — Average Actual Yearly Earnings (Manufactures): From Massachusetts Labor Bulletin No. 28, 1903. All Industries: 1890-1902. Average Yearly Earnings, $433.56; Males, 178,329; Females, 91,866; Both Sexes, 270,195.

Agriculture. [Nos. 40–45.]

No. 40. — Agricultural Property: From the Massachusetts Decennial Census, 1895. Total Value of all Property, $219,957,214.

No. 41. — Agricultural Property: From the Massachusetts Decennial Census, 1895. Land: Total Number of Acres, 3,847,749½; Cultivated, Uncultivated, Woodland, etc.

No. 42. Agricultural Property: From the Massachusetts Decennial Census, 1895. Classification of Farm Land: Number of Farms, Gardens, Lots, etc., in all Classes, 65,287.

No. 43. — Agricultural Property: From the Massachusetts Decennial Census, 1895. Comparative Number of Farms of Specified Size: 1885-1895.

No. 44. — Agricultural Property: From the Massachusetts Decennial Census, 1895. Total Value, Fruit Trees and Vines, $7,924,878; Apple, Peach, and Pear Trees, and Grapevines, etc.

No. 45. — Principal Agricultural Products: From the Massachusetts Decennial Census, 1895. Total Value of All Products, $52,880,431.

The Fisheries. [Nos. 46, 47.]

No. 46. — Product of The Fisheries. From the Massachusetts Decennial Census, 1895. Total Value of all Products, $5,703,143.

No. 47. — Principal Food Fish Products: From the Massachusetts Decennial Census, 1895. Total Value Food Fish Products, $5,194,265.

Coastwise and Ocean Commerce. [No. 48.]

No. 48. — Coastwise and Ocean Commerce under the American Flag: From the Massachusetts Decennial Census, 1895. Total Earnings, $9,339,321 (Earnings from Freight and Passengers).

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